

Atlanta
Beijing
Brussels
Chicago
Frankfurt
Hong Kong
London
Los Angeles
Milan
New York
Orange County
Palo Alto
Paris
San Diego
San Francisco
Shanghai
Tokyo
Washington, DC

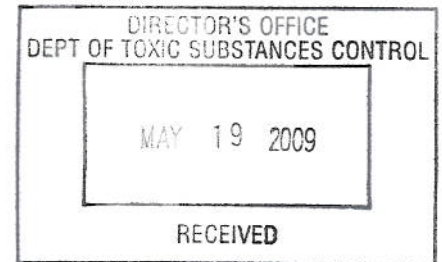
(916) 552-6830
roberthoffman@paulhastings.com

May 18, 2009

VIA UPS

Maziar Movassaghi
Acting Director
Department of Toxic Substances Control
1001 I Street
Sacramento, CA 95814

73296.00015



Re: Delta Group Report "Deposition of coarse toxic particles in Wilmington, CA for the Department of Toxic Substances Control"

Dear Mr. Movassaghi:

I am writing to you on behalf of SA Recycling, LLC regarding the above-referenced report posted by the Department of Toxic Substances Control on the Department's website. The dissemination of this report prior to appropriate peer review, consultation with SA Recycling, or consultation with the South Coast Air Quality Management District was both tremendously unfair to the company and irresponsible in light of the needless alarm and angst it will undoubtedly cause anyone in the community who reads it.

This report draws several inflammatory conclusions about our client, SA Recycling, and its operation of an automobile and appliance shredding facility located in Terminal Island, California. An initial review of the report reveals serious deficiencies that we believe need to be brought to your immediate attention. SA Recycling's technical consultants at Yorke Engineering, LLC have thoroughly reviewed the report, and found it to grossly misrepresent the facility's impact on air quality and pollution in the Long Beach area. The Yorke analysis, which details problems in the Delta Group report, is attached.

There are numerous troubling aspects about the Delta Group report. First, it implies that lead particulate in the air in Wilmington is present at hazardous levels. This conclusion ignores the fact that the report's own data show that the ambient lead levels are below the recently adopted federal standards for sensitive populations. Second, the report attributes area-wide particulate matter solely to SA Recycling's operations. This assertion is truly incredible, given that SA Recycling's facility is located in the highly industrialized port area where the concentration of multiple stationary and mobile sources has been, and continues to be, a subject of heightened concern by all levels of government. For example, the facility is just blocks away from the Long Beach SERRF municipal solid waste incinerator, large grading sites and other contributing sources that the Delta Group's analysis fails to consider.

Maziar Movassaghi

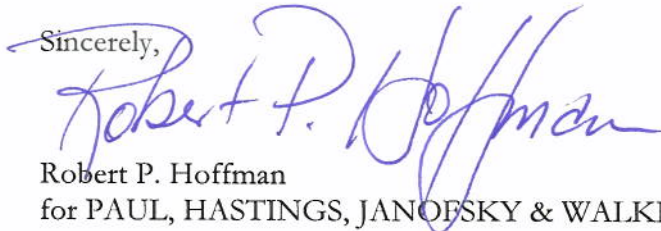
May 18, 2009

Page 2

Moreover, *actual* monitoring data collected from the facility flatly contradicts the conclusions regarding emissions reached by the Delta Group report. The report incorrectly speculates about when and how SA Recycling conducts its business. To highlight just one example, the report seeks to attribute to SA Recycling emissions collected on several days the facility wasn't even in operation. Prior to releasing the report, neither the Department nor the Delta Group sought access to the facility to confirm the Delta Group's assumptions about operations. This failure to communicate occurred despite the fact that SA Recycling has repeatedly offered to host DTSC for an onsite review of its operations, an invitation that was first extended *before* this "on-going investigation" began and one that remains open today.

Although the damage wrought by the premature release of the report cannot be undone, we request that the Department post this letter and the attached Yorke analysis on your website to allow interested parties to see a more complete view of the subject. We may provide additional analysis, if appropriate, based upon information we expect to receive in response to our pending Public Records Act request for additional data. In addition, we again invite the Department to discuss any concerns or suspicions it has about SA Recycling's environmental practices with the company before issuing additional statements about the company's operations or taking any further actions based on limited external surveillance.

Sincerely,



Robert P. Hoffman

for PAUL, HASTINGS, JANOFSKY & WALKER LLP

Attachment

cc: Odette Madriago, Chief Deputy Director, DTSC, w/o attachment
Gale Filter, Deputy Director, DTSC, w/o attachment
Matt Bogoshian, Deputy Secretary, Cal/EPA, with attachment

May 14, 2009

Mr. Gale Filter
Deputy Director
Enforcement and Emergency Response Program
Department of Toxic Substances Control
1001 "T" Street
Sacramento, CA 95814

**Subject: UC Davis DELTA Group Report – Deposition of Coarse Toxic Particles in
Wilmington, CA**

Dear Mr. Filter:

We have reviewed the April 21, 2009 report prepared by the UC Davis DELTA Group entitled "Deposition of coarse toxic particles in Wilmington, CA for the Department of Toxic Substances Control." The report, prepared for the California Department of Toxic Substances Control (DTSC) and published on the DTSC website, purports to provide an assessment of particulate emissions from the SA Recycling scrap metal recycling facility on Terminal Island in the Port of Los Angeles. We have identified several significant deficiencies and inaccuracies in the report. These fundamental issues, which call into question the credibility and utility of the report, are discussed in order of significance below:

SUMMARY OF OBSERVATIONS

- 1. The lead concentrations collected for the DELTA Group study are well below levels that the US EPA has established as protective of human health and the environment.** The DELTA Group report clearly implies that the shredder is the source of lead deposition in Wilmington and that the lead poses an immediate health hazard. As discussed in detail below, the study's conclusions regarding the source of the lead are clearly wrong. However, it is very important to understand that the concentrations of lead reported in the study are well below the very stringent thresholds recently established by the US EPA as protective of human health and public welfare.
- 2. Hazardous waste standards do not apply to air emissions and the DELTA Group study does not use approved methodologies.** The DELTA Group report compares the concentrations of lead found in the materials collected for the study with DTSC regulations defining hazardous waste. However, air emissions are expressly excluded from regulation as a waste. The California Legislature has determined that local air districts, like the South Coast Air Quality Management District, are the appropriate agencies to address particulate in the air. In addition, the study fails to use applicable US

EPA, California Air Resources Board, Occupational Health and Safety, or South Coast AQMD test methods to quantify air emissions or health risks and instead uses a little known academically developed sampling approach and then inexplicably applies hazardous waste criteria that are legally inapplicable to air samples.

3. **There are other well known and documented stationary sources of particulate, iron, and lead in close proximity.** In describing the source of particulate collected at a location in Wilmington, the DELTA Group report summarily concludes, "This proves that all the lead seen in any wind direction is caused by shredder operations, current and past." (page 40). To any informed observer, this conclusion is not credible given the well known and documented sources of lead emissions in close proximity to the sample location. For example, the SERRF municipal solid waste incinerator located on the same portion of Terminal Island has SCAQMD reported emissions of 50.67 tons per year of total suspended particulates, including 229 lbs/year of lead and 31 lbs/year of nickel, in 2005. (In fact, there are tons of metals retrieved from the ash of the SERRF incinerator and recycled each year.) In addition, contrary to the assumptions in the report, there are significant construction grading sites in the same vicinity of Terminal Island that were disturbed during the sampling period. The report fails to consider or even mention the potential impact of iron and lead from these sites.
4. **There are particulates, lead and other trace metals emitted by the ships, locomotives, and trucks in operation daily throughout the port area from residual oil (bunker fuel) and diesel fuel combustion.** The DELTA Group report bases its conclusions on "unambiguous tracers" asserted to be from the shredder (i.e., lead and iron) which "are confirmed by evidence of upwind aerosols from the harbor, including natural sea salt and the vanadium/nickel/sulfur pollution of ocean going ships using bunker oil as fuel." The report ignores the findings of the California Office of Environmental Health Hazard Assessment that document the presence of lead in diesel and residual oil which is used for marine fuel ("Used Oil in Bunker Fuel: A Review of Potential Human Health Implications", Dec. 2004), the AB 2588 Air Toxics emission factors for engine combustion of diesel fuels [Ventura County Air Pollution Control District (VCAPCD), May 17, 2001], and the monitoring efforts by the Ports of Los Angeles ("POLA") and Long Beach ("POLB"). According to the OEHHA report, diesel fuel (per mean values) contains 1.8 ppm lead and residual fuel contains 3.5 ppm lead (Table 4, page 23). The VCAPCD AB 2588 Emission Factors, based on engine emissions testing, document that lead is present in diesel fuel oil combustion at approximately two times the level of nickel by weight: 0.0083 lbs Pb/1000gal and 0.0039 lbs Ni/1000gal respectively. The data collected by the monitoring programs at both the POLA and POLB have been used by the SCAQMD to determine the risk of diesel particulate matter ("DPM") in the port area. Indeed, the DELTA Group fails to consider the diesel emissions (i.e, DPM), and resulting lead emissions from the large amount of diesel activity in the port area. Significantly, despite its hyperbole, the report includes absolutely no direct correlation of lead and/or iron to the shredder operations.

5. **The estimate of 28.3 tons of uncontrolled emissions over 120 days is unsubstantiated and inconsistent with actual data.** On page 41 of the DELTA Group report, there is an unsubstantiated assertion that the Terminal Island facility was the source of 28.3 tons of uncontrolled emissions over a 120-day period in 2008. This appears to be based on an estimate of 68.87 tons per year of controlled emissions. This estimate is clearly inaccurate as shown by the stack source test data reviewed and approved by the South Coast AQMD. Further, there was no 120-day period since the acquisition of the facility by SA Recycling in 2007 during which there were no particulate matter controls employed on the Terminal Island shredder.
6. **Particle size and content do not “prove” source of emissions.** On pages 39-40, the DELTA Group report attempts to use particulate size distributions and content to demonstrate that the samples collected definitively “prove” that all lead collected is “caused by shredder operations, current and past”. However, the data provided is insufficient to “prove” any connection to the shredder given the other well known stationary and mobile sources in the port area.
7. **The sample data does not correlate with shredder operations.** Figures 24 and 25 in the DELTA Group report claim to demonstrate a clear correlation between samples collected and shredder operations. In fact, these claims are contradicted by the actual shredder operating records. The DELTA Group data show that there are particulate “peaks” on days where the wind was blowing from graded areas toward the Fire Station, peaks when there were no shredder operations, and elevated lead levels on days when the wind was blowing from the sample collection point toward the shredder.

DETAILED DISCUSSION

1. The Lead Concentrations Collected for the Study are Well Below Levels the US EPA has Established as Protective of Human Health and the Environment

The DELTA Group report clearly implies that the shredder is the only source of lead emissions in the vicinity and that these lead emissions represent an immediate health hazard. Notwithstanding the source of the lead collected for the study, the report fails to explain that the concentrations of lead reported are well below the concentrations the US EPA has established as protective of human health and public welfare. Using the data shown in Figure 31 on page 26, the average lead concentration during the August 14-19, 2008 time period was estimated to be 55.2 ng/m^3 ($0.0552 \text{ }\mu\text{g/m}^3$) for all size fractions. This particulate level is well below the US EPA’s recently promulgated standard for sensitive receptors.

In November 2008, two months after the study was completed, the US EPA revised the National Ambient Air Quality Standard (“NAAQS”) for lead.¹ The final rule tightened the NAAQS levels for lead from $1.5 \text{ }\mu\text{g/m}^3$ to $0.15 \text{ }\mu\text{g/m}^3$ as an arithmetic mean concentration over a 3-month

¹ National Ambient Air Quality Standards for Lead, 73 Federal Register 66964 (Nov. 12, 2008) (to be codified at 40 CFR Parts 50, 51, 53, and 58).

period. 40 CFR § 50.16. In establishing these more protective levels, US EPA explained that it was seeking to provide a significant increase in protection for children and other at-risk populations. 73 FR at 67006. The resultant NAAQS levels protect against an array of adverse health effects, most notably including neurological effects in children including neurocognitive and neurobehavioral effects. Further, the standard addresses physiological and demographic factors including providing protection to children that are particularly more sensitive to lead due to genetic polymorphisms, nutritional status (e.g., iron deficiency and calcium uptake), elevated exposures such as residing near sources of ambient lead, and socioeconomic factors such as reduced access to healthcare or lower socioeconomic status. 73 FR at 66976.

The DELTA Group report provides no data to suggest that the newly promulgated NAAQS for lead of 0.15 µg/m³ was exceeded at the sampling point during the reporting period. In fact, the levels of lead measured by the study appear to be an order of magnitude below the NAAQS. Thus, even though the report uses inflammatory language regarding health risk, the report actually confirms that lead levels at the sampling point are below those levels EPA has established as protective of the health of the most sensitive population group and the environment.

In addition to the report's data regarding lead at the sampling locations, onsite sampling at the shredder has found no evidence that shredder operations result in exposures to lead, or other chemical compounds or physical agents, above levels established by the California Department of Occupational Safety and Health ("CalOSHA") or those set by the American Conference of Governmental Industrial Hygienists ("ACGIH"). Industrial hygiene surveys conducted to evaluate the exposures experienced by individuals working near the shredder and shredder residue have found that exposures are either below laboratory detection limits or are orders of magnitude below permissible exposure limits ("PELs") or threshold limit values ("TLVs").

2. Hazardous Waste Standards Do Not Apply To Air Emissions

The DELTA Group report compares the lead fraction found in particulates collected from the air near Fire Station #49 (the sampling point) to the hazardous waste regulatory threshold for total lead. The implication is that air borne particulates with lead concentrations above 1000 ppm that settle to the Earth constitute a disposal of hazardous waste. This theory is fallacious and any conclusions drawn from this analysis are not the law in California for the following reasons.

First, by statute, air emissions are not a waste. Waste is specifically defined as "any solid, liquid, semisolid, or contained gaseous discarded material." Cal. H&S Code 25124(a). Contained Gaseous Material is statutorily defined as a "gas that is contained in an enclosed cylinder or other enclosed container" and expressly "does not include any exhaust gas...regardless of source, that is abated or controlled by an air pollution control device that is permitted by an air pollution control district." Cal. H & S Code 25110.11. In contrast, air emissions are uncontained gases, not solids, liquids, semisolids or contained gaseous discarded materials. Therefore, air emissions are not wastes. By law, a material that is not first a waste cannot be a hazardous waste. Cal. H&S Code 25117(a).

These definitions of waste and contained gaseous material are the result of revisions to the California Health and Safety Code expressly intended to “exclude uncontained gases from the DTSC’s hazardous waste regulatory authority.” Senate Committee on Toxic and Public Safety Management’s Analysis of Senate Bill No. 2057 (1991-1992 Reg. Sess.) May 4, 1992, at 2, The revision to the definition of waste was made because the DTSC’s “hazardous waste criteria [did] not appear to be appropriate for uncontained gases.” *Id.* at 4. Specifically, the analysis observed that gases do not fit within the normal management, and handling practices that the hazardous waste regulations are designed to address. Thus, the Legislature determined that the Air Resources Board and local air quality districts are more appropriate agencies to address air emissions. Therefore, comparisons to the Department’s regulations are inappropriate because the Legislature has clearly stated that these standards do not apply to air emissions.

Second, notwithstanding the jurisdictional defects, the samples utilized by the DELTA Group do not meet State or Federal standards for waste classification. Waste containing lead may be characterized as hazardous only where analysis of a representative sample of the waste finds lead concentrations above 1000 ppm. 22 CCR 66261.21. A representative sample is one collected in accordance with the protocols described in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” SW-846, 3rd edition, 1986. 22 CCR 66261.20(c). SW-846 is the official compendium of analytical and sampling methods approved for use in applying hazardous waste regulations. The Study’s sampling was not consistent with SW-846. Consequently, the resultant samples cannot be used in characterizing a material as a hazardous waste.

Third, DTSC regulations require analysis of eligible samples to be in accordance with SW-846. 22 CCR 66261.20(c). The samples The DELTA Group collected were analyzed using X-Ray Spectroscopy, which is not one of the methods approved in SW-846. Thus, even if the samples were legally acceptable, the analytical method used is not acceptable for purposes of waste characterization.

SW-846 also sets forth minimum requirements for quality assurance and quality control procedures. A quality assurance program is required to ensure that data collection and analysis is scientifically valid, defensible, and of known precision and accuracy. The data acquired from the procedures are used to estimate the quality of analytical data, to determine the need for corrective action in response to identified deficiencies, and to interpret results after corrective action procedures are implemented.

SW-846 provides that a program to generate data of acceptable quality should include certain fundamental elements including:

1. Design of a project plan to achieve data quality objectives;
2. Implementation of the project plan; and
3. Assessment of the data to ensure that the objectives are met.

The report is notable for the absence of required quality assurance and quality control procedures. This deficiency calls into question whether any of the data is valid at all.

3. Other Well Known and Documented Stationary Sources of Particulate, Iron, and Lead in Close Proximity

There are a number of other larger stationary emission sources in the vicinity of SA Recycling. Table 1 shows all South Coast AQMD-listed facilities within a 1 mile radius of SA Recycling. The table shows reported lead emissions data for 2005 and 2006. Of the 37 facilities listed six reported lead emissions from onsite stationary sources. Each of these 37 facilities are also likely to have mobile source emissions, which are not required to be included in these reports, but which are certain to include diesel combustion contaminants, which also emit lead (0.0083lbs/1000gal, per Ventura County Air Pollution Control District, AB 2588 Combustion Emission Factors, Diesel Fuel Combustion, May 17, 2001.)

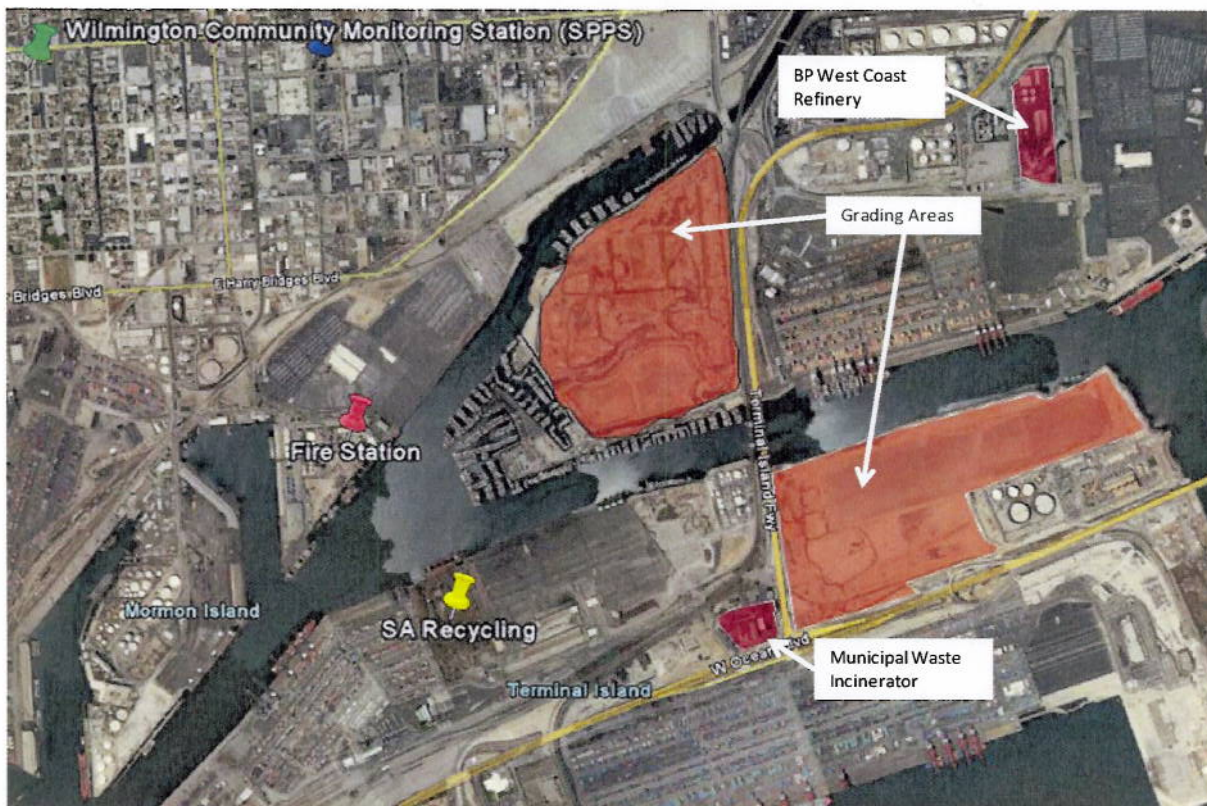
Two of the facilities reported significant lead emissions: Long Beach City SERRF Project (ID 44577), and BP West Coast Products (ID 131249). In their 2005 and 2006 annual emission reports, the nearby SERRF municipal solid waste incinerator reported emissions of 50 and 18 tons per year of particulate matter (PM), and 229 and 66 lbs/year of lead, respectively. As part of their operations, after incineration, the facility collects burnt metal from the ash by mechanical separation, extracting thousands of tons of metal each year. The BP West Coast Products facility reported 69 and 42 tons/year of PM, and 92 and 97 lbs/year of lead in 2005 and 2006, respectively.

Moreover, besides these permitted stationary sources there are two large areas on Terminal Island where significant grading operations have been ongoing. These grading operations have the potential to emit substantial particulate, including iron and lead emissions from the filled soils. (Please refer to aerial photo in Figure 1.)

Table 1: Stationary Source SCAQMD Reported Emissions Within 1 mile Radius

Facility ID	Name		Address	City	State	Zip	Lead Emissions (lb/yr)	
							2005	2006
2209	LA CITY, DWP, MARINE TANK FARM, UNIT 2	161	N ISLAND	AVE WILMINGTON	CA	90057	n/a	n/a
2983	US BORAX & CHEM CORP	300	FALCON	ST WILMINGTON	CA	90744	n/a	n/a
6169	LA CITY, DEPT OF GEN SERVICES	400	YACHT	ST WILMINGTON	CA	90744	n/a	n/a
6586	VOPAK TERMINAL LOS ANGELES, INC.	401	CANAL	ST WILMINGTON	CA	90744	n/a	n/a
8066	US BORAX & CHEM CORP UNIT NO. 9	300	FALCON	ST WILMINGTON	CA	90744	n/a	n/a
9638	US BORAX INC	300	FALCON	ST WILMINGTON	CA	90744	n/a	n/a
10245	LA CITY, TERMINAL ISLAND TREATMENT PLANT	445	FERRY	ST SAN PEDRO	CA	90731	0.001	0.001
10928	US BORAX INC	300	FALCON	ST WILMINGTON	CA	90745	n/a	n/a
18636	US BORAX & CHEM CORP UNIT NO. 2	300	FALCON	ST WILMINGTON	CA	90744	n/a	n/a
22906	EXXONMOBIL OIL CORP	551	PILCHARD	ST SAN PEDRO	CA	90731	n/a	n/a
23899	EXXONMOBIL OIL CORP	551	PILCHARD	ST SAN PEDRO	CA	90731	n/a	n/a
44577	LONG BEACH CITY, SERRF PROJECT	100 - 120	HENRY FORD	AVE LONG BEACH	CA	90802	229.068	65.678
54004	WILMINGTON LIQUID BULK TERM INC GNRL	401	CANAL	AVE WILMINGTON	CA	90744	n/a	n/a
63736	ULTRAMAR INC	961	LA PALOMA	AVE WILMINGTON	CA	90744	n/a	n/a
64908	CITY OF LA, BOS, WASTEWATER COLL SYS DIV	390	N SEASIDE	AVE SAN PEDRO	CA	90731	n/a	n/a
109759	UNITED STATES SEA LAUNCH LIMITED PARTNER	2700	NIMITZ	RD LONG BEACH	CA	90802	n/a	n/a
112562	AMERICAN PRESIDENT LINES, LTD., TERML 300	614	TERMINAL	WAY SAN PEDRO	CA	90731	n/a	n/a
117851	SHORE TERMINALS, LLC	841	LA PALOMA	AVE WILMINGTON	CA	90744	n/a	n/a
128888	TRAYLOR PACIFIC	902	REEVES	TERMINAL ISLAND	CA	90731	n/a	n/a
129242	TUTOR SALIBA CORP	890	REEVES	AVE TERMINAL ISLAND	CA	90731	n/a	n/a
131249	BP West Coast Products, LLC	1175	Carrack	Ave Wilmington	CA	90748	92.244	96.975
132412	APM TERMINALS	2500-200	NAVY	WAY SAN PEDRO	CA	90731	n/a	n/a
132415	APM TERMINALS	2500-100	NAVY	WAY SAN PEDRO	CA	90731	n/a	n/a
132416	APM TERMINALS	2500-300	NAVY	WAY SAN PEDRO	CA	90731	n/a	n/a
132969	APM TERMINALS - MPL	2500-430	NAVY	WAY SAN PEDRO	CA	90731	n/a	n/a
137722	VOPAK TERMINAL LONG BEACH INC, A DELAWARE	3601	DOCK	ST SAN PEDRO	CA	90731	0	0
136965	Tidelands Oil Production Company	975	Pier F	Ave Long Beach	CA	90802	0	0
142493	MERIDIAN MANAGEMENT CORP.	300	S FERRY	ST SAN PEDRO	CA	90731	n/a	n/a
144909	NEXTEL OF CALIFORNIA INC.	300	FERRY	ST SAN PEDRO	CA	90731	n/a	n/a
146313	PACIFIC LA MARINE TERMINAL LLC	801	REEVES	AVE SAN PEDRO	CA	90731	n/a	n/a
146546	PACIFIC LA MARINE TERMINAL LLC	3000	NAVY	WAY TERMINAL ISLAND	CA	90731	n/a	n/a
148141	PORT OF LONG BEACH	306	N HENRY FORD	AVE LONG BEACH	CA	90802	n/a	n/a
149886	TIDELANDS OIL PRODUCTION COMWEST DOW	3555	DOCK	ST LONG BEACH	CA	90802	n/a	n/a
152033	Tesoro Ref. & Mktg. Co.	820	Carrack	Ave Long Beach	CA	90813	n/a	0.001
800092	Exxon Mobil Corp.	799	S Seaside	Ave Terminal Island	CA	90731	0.002	0.008
800149	US BORAX INC	300	FALCON	ST WILMINGTON	CA	90744	0.393	0.026
800196	ULTRAMAR INC (NSR USE ONLY)	961	LA PALOMA	AVE WILMINGTON	CA	90744	0.074	0.003

Figure 1: Location of SA Recycling and Known Sources of Particulate and Lead



4. There are particulates, lead and other trace metals emitted by the ships, locomotives, and trucks in operation daily throughout the port area from residual oil (bunker fuel) and diesel fuel combustion

In December 2004, the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment published a report: "Used Oil in Bunker Fuel: A Review of Potential Human Health Implications". This report documents the presence of lead and other contaminants in diesel and residual oil fuels commonly combusted in and around the ports of Los Angeles and Long Beach. Figure 2, below, shows Table 4 of this report which documents the concentrations (in ppm) expected of lead and other contaminants in diesel and residual oil. These contaminants are directly emitted in the products of combustion when burned in a ship, locomotive, or truck engine. None of these values were considered in the DELTA Group report.

Figure 2: OEHHA's Report Documenting Lead Concentrations in Port Fuels

Table 4. Concentrations of Regulated Chemicals in New Lubricating Oil, Used Oil, Distillate Fuel, and Residual Fuel (in ppm)
(Note: The single value shown is the mean of the data set; the range is shown in parenthesis. ND – Not detected; NA – Not available; NR – concentrations not reported due to "analytical difficulties")

	CA limits	New Lube Oil		Used Oil					Distillate Fuel*	Residual Fuel*	
		Meinz et al. 2004	Vermont 1996	Brinkman & Dickson 1995	Vermont 1996		Sivia et al. 1998	Meinz et al. 2004	USEPA 1993	USEPA 1993	Lloyd's Register 1995
					Gasoline Engine	Diesel Engine					
As	5	ND	NR		NR	NR	<2.5	0.12 (ND – 0.45)	0.8 (0.10-0.2)	0.8 (0.02-2.0)	(0.27 – 1.0)
Cd	2	ND	<0.25	ND (ND – 5)	<1.5 (ND – 3.3)	2.4 (0.8 – 6.6)	1.03	0.17 (ND – 0.86)	0.3 (0.1-0.9)	2.3** (0.01-0.9)	ND
Cr	10	1.4	<2.0	10 (ND – 233)	3.2 (ND – 4.2)	3.9 (2.4 – 6.9)	<5	4.5 (2.0 – 17.6)	1.3 (0.5-2.8)	1.3 (0.1-1.7)	(ND – 0.39)
Pb	50	0.15	<20	29 (ND – 265)	47.2 (ND – 104)	57 (23.6 – 146)	42.5	13.2 (0.2 – 66.1)	1.8 (0.5-4.4)	3.5 (0.1 – 8.0)	(ND – 0.15)

To quantify toxic air emissions for the California Air Toxics "Hot Spots" Act, diesel combustion emission factors, as developed by the Ventura County Air Pollution Control District² from engine source testing, are commonly used and are published for use on the South Coast AQMD website. These emission factors, as shown in Figure 3, document that both lead and nickel are well known toxics from diesel/fuel oil combustion. In fact, this data shows that by weight, the lead emissions are approximately twice that of nickel (0.0083 lbs Pb/1000gal and 0.0039 lbs Ni/1000gal respectively). The Terminal Island shredder, in contrast, is powered by electricity.

Thus, the exaggerated claim in the DELTA Group report that...

"Elemental and mass values from the UC Davis DELTA Group 8 DRUM impactor, with DTSC personnel, support, and execution, have delivered unambiguous tracers of the impact of the Terminal Island auto/appliance shredder on Wilmington. These tracers overlap known hours of shredder operation and transport on south winds, and are confirmed by evidence of upwind aerosols from the harbor, including natural sea salt and the vanadium/nickel/sulfur pollution of ocean going ships using bunker oil as fuel..." (Executive Summary)

...cannot be accurate, since the "pollution of ocean going ships" is also well known to include lead. (In addition, there are large storage piles from ship loads of salt maintained not far from the area in question, likely resulting in some of the "natural sea salt" measured).

² <http://www.aqmd.gov/prdas/pdf/COMBEM2001.pdf>, VCAPCD, May 17, 2001

Figure 3: VCAPCD Diesel Combustion Emission Factors

Diesel Combustion Factors

Diesel (#1, #2 fuel oil) combustion factors were developed for listed substances identified by the CARB as significant components of diesel fuel combustion emissions (2) and for federal HAPs for which data was available.

Diesel Combustion Factors

Pollutant	external combustion	internal combustion
	Emissions (lb/1000 gal)	
benzene	0.0044	0.1863
formaldehyde	0.3506	1.7261
PAHs (including naphthalene)	0.0498	0.0559
naphthalene	0.0053	0.0197
acetaldehyde	0.3506	0.7833
acrolein	0.3506	0.0339
1,3-butadiene	0.0148	0.2174
chlorobenzene	0.0002	0.0002
dioxins	ND	ND
furans	ND	ND
propylene	0.0100	0.4670
hexane	0.0035	0.0269
toluene	0.0044	0.1054
xylenes	0.0016	0.0424
ethyl benzene	0.0002	0.0109
hydrogen chloride	0.1863	0.1863
arsenic	0.0016	0.0016
beryllium	ND	ND
cadmium	0.0015	0.0015
total chromium	0.0006	0.0006
hexavalent chromium	0.0001	0.0001
copper	0.0041	0.0041
lead	0.0083	0.0083
manganese	0.0031	0.0031
mercury	0.0020	0.0020
nickel	0.0039	0.0039
selenium	0.0022	0.0022
zinc	0.0224	0.0224

ND - not detected

With all of the diesel activity that is evident in the port area, the DELTA Group's report fails to consider this distinct group of sources, in addition to other relevant air monitoring data from

stations operated by either the California Air Resources Board or by the Port Los Angeles ("POLA") and Long Beach ("POLB"). All of these monitoring programs (i.e., CARB, POLA and POLB) monitor particulate matter emissions and wind direction, at several stations that can be found either upwind or downwind of SA's Terminal Island facility.

The Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III) study has already relied on some of these data to analyze diesel particulate matter ("DPM") contributions to PM concentrations in the ambient air in the port area. According to MATES III, DPM continues to dominate the risk from air toxics and, as discussed previously in this document, diesel fuel emissions are a recognized source of lead in PM. Inexplicably, the DELTA Group's report fails to account for DPM from POLA and POLB operations as sources of lead in the ambient air. Further, the wind data collected over years of CARB and POLA and POLB monitoring demonstrate that PM concentrations in the ambient air measured at the sampling point, whether from a stationary source or re-entrained from earlier surface deposition could be due to numerous other sources operating in the area.

5. Estimate of 28.3 Tons of Uncontrolled Emissions Over 120 Days is Unsubstantiated and Inconsistent with Actual Data

On page 41 of the DELTA Group report, the authors reference a Microsoft Excel document that was used to calculate annual emissions of some pollutant. It is not clear from the text if the pollutant in question is particulate matter or lead. In any case, the authors have apparently used a spreadsheet to calculate that the Terminal Island shredder operating with no control system would emit 86.08 tons per year (for some 120-day period the author quoted 28.3 tons). Assuming that the author is referring to particulate matter emissions, this calculation is in stark contrast to the emissions that were documented in the facility's Annual Emission Report to the South Coast AQMD. The particulate matter emissions that were reported to the South Coast AQMD were calculated using an emission factors from an approved shredder source test. For the year during which the samples were taken, controlled emissions are calculated to be approximately 5.69 tons of particulate matter. During that time period there were no periods of operation without particulate matter controls on the shredder. In fact, according to the South Coast AQMD, SA Recycling employs state-of-the-art particulate matter control methods.

6. Particle Size and Content Do Not "Prove" Source of Emissions

In items 2 and 3 on page 39 of the DELTA Group report, the authors claim that, when the shredder is not operating and the wind is blowing from the shredder to Fire Station 49, there is a high concentration of lead in the 10 to 5 μm size range. Additionally, the author claims that, when the shredder is operating there is a high concentration of lead in the 5 to 2.5 μm size range. This is used to attribute the high concentration of lead in the larger size range to the "Shredder product pile fugitive dust" and the high concentration of lead in the smaller size range to the "Shredder operations." The claim that there is an increase in lead emissions when the wind is blowing from the shredder to Fire Station 49 is not accurate. Indeed, when the wind is not blowing in the favorable direction (i.e., when the wind is blowing from Station 49 toward the shredder) as shown on Figure 33 (page 27) on August 24th, lead concentrations are between 30-

45 ng/m³ (Figure 37, page 30), and are actually higher than the claimed 15 to 20 ng/m³ background lead concentration (item 1 on page 39).

When these observations are considered together, no discernable evidence is provided that substantiates the notion that the increase in lead concentrations seen in the 10 to 5 µm size range is due to "Shredder product pile fugitive dust." That is, lead concentrations are actually higher than the background values when the wind is blowing in a direction that is away from Station 49.

The report includes two plots: one showing iron vs. lead in the 10 to 5 µm size range and one showing iron vs. lead in the 5 to 2.5 µm range. The relationship between the iron and lead concentrations in the linear portion of the plots and the apparent iron concentration with no lead present is used to make the assertion that "This proves that all the lead seen in any wind direction is caused by shredder operations, current and past". While these graphs do show a similar relationship between the iron and lead concentrations in the two size ranges, there is not a credible basis to make this claim.

The authors have not provided any evidence as to other significant combustion or process (industrial and mobile) sources of iron and lead in these size ranges that could have impacted Fire Station 49 in the same manner. Given the documented presence of lead in diesel and residual oil used in ship, locomotive, and truck engines, the author does not address the potential for possible adsorption or chelation with iron in products of combustion from engines. As documented by EPA ("Health Assessment Document For Diesel Engine Exhaust", May 2002), "The particles present in DE (i.e., diesel particulate matter [DPM]) are composed of a center core of elemental carbon [EC] and adsorbed organic compounds [OC], as well as small amounts of sulfate, nitrate, metals, and other trace elements." And while the fine and ultrafine particulates are well studied and associated with health risks due to this size range's impact on lungs, EO and OC are also documented in the size ranges of 2.5-10 microns. For example, "Measurements of OC and EC in Coarse Particulate Matter in the Southeastern United States"³ documents, "On average, total carbon (OC+EC) comprised approximately 30% of PM_{10-2.5} mass at these four sites [two urban and two rural]."

Further, the author has not allowed for the possibility that contaminated soil from the large construction areas of the port could have impacted Fire Station 49 and the reason for the similar relationship between the two size ranges is some form of adsorption or chelation of the lead in the contaminated soil by the form of iron that is present in the soil.

7. Sample Data Does Not Correlate with Shredder Operations

We analyzed the shredder's production data during the period of the DTSC study and identified frequent and significant discrepancies between reported lead measured and actual times of shredder operations.

On page 33 of the DELTA Group report under Figure 43, the authors state that "This period is interesting because despite favorable meteorology, there was minimal shredder impact on Sunday and Monday." In fact, the shredder was shut down on Sunday, the 7th, but operational

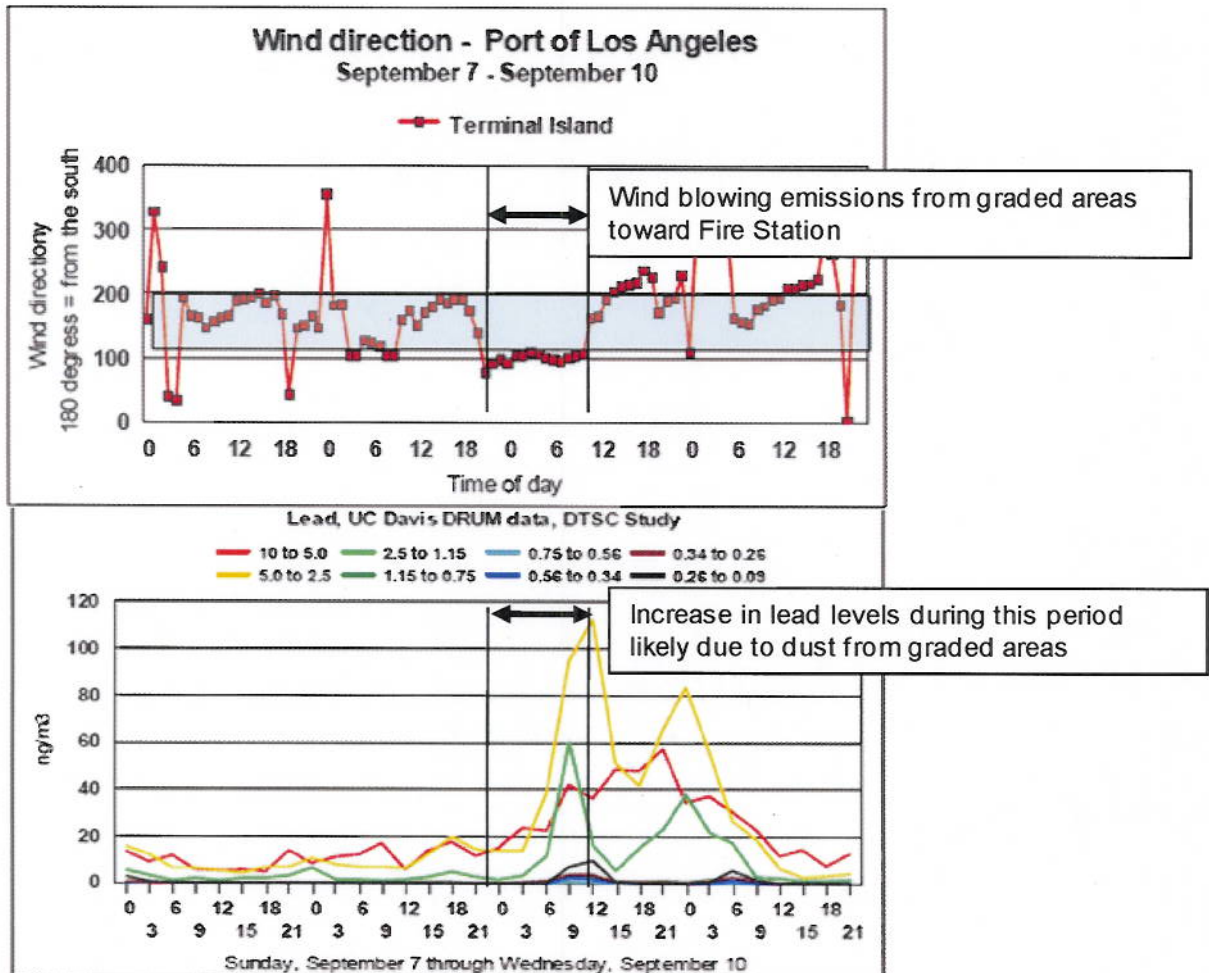
³ Edgerton, et. al., Journal of the Air & Waste Management Association, January 2009

the rest of the week. On Tuesday, September 9, the data shows a spike in lead levels. However, during hours of operation on that day (05:00 – 11:00) the wind was consistently blowing from 100 degrees; this is outside the range where emissions from the facility could impact the Fire Station. Note that this direction of wind would be expected to pick up particulate from the graded areas or the incinerator and carry them to the Fire Station monitoring station. However, the study fails to note the existence of these huge grading operations.

Figure 4: Wind Direction Favorable for Other Sources of Particulate Matter and Lead

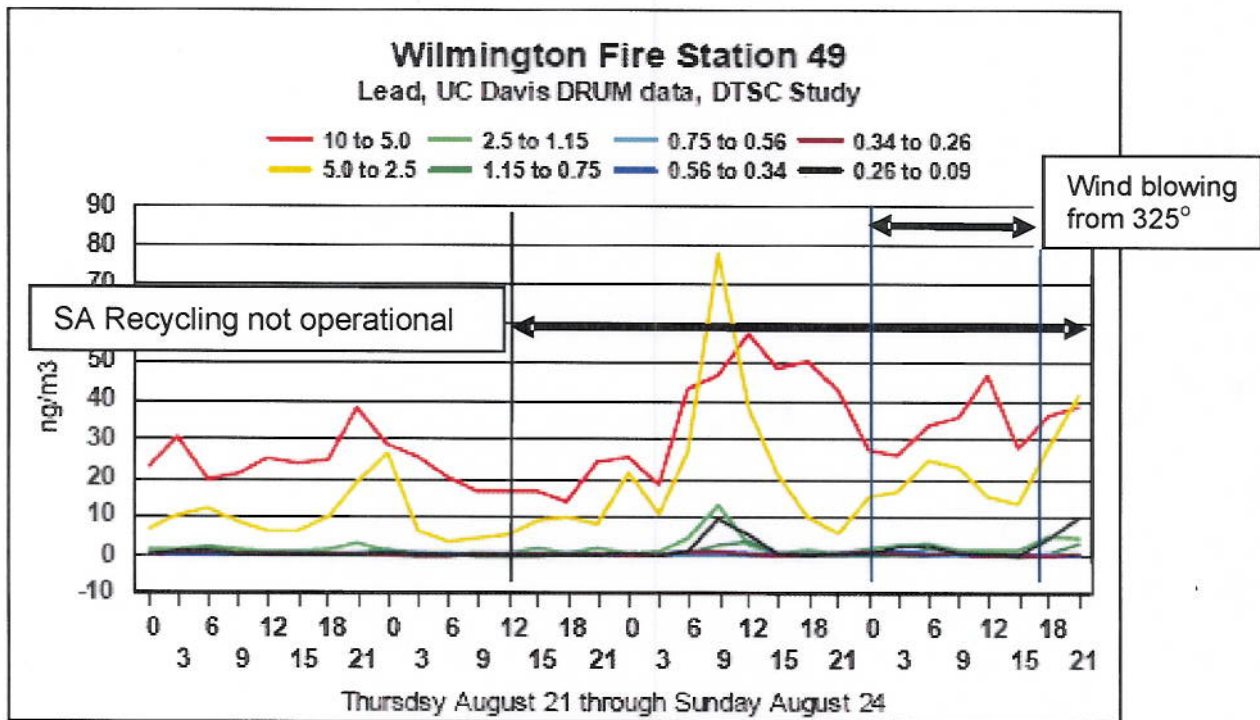


Figure 5: Wind Direction Showing Transport from Other Sources of Particulate Matter and Lead



On page 39 of the report there is detailed lead data for the period from Thursday August 21 through Sunday August 24. There is a definite spike in emissions on Saturday, August 23. However, the shredder did not operate between 12:00 PM Friday August 22, and 05:00 AM Monday August 25. These obvious incongruities, easily ascertained by visual observation or a review of facility records, were not addressed in the report or accounted for in its conclusions.

Figure 6: Data Proving Emissions from Other Sources of Particulate Matter and Lead



As shown on page 27 of the report, Figure 33, on August 24 from 00:00 to 12:00, the wind is blowing from the Fire Station toward the shredder with an average heading of 325 degrees. As noted above, this period, corresponds to a period when the shredder was not operating. The elevated lead readings shown in Figure 6 above (Figure 36 in the report) could not be from the shredder but from another source entirely.

Figure 7: Wind Direction Blowing from Fire Station Toward Shredder

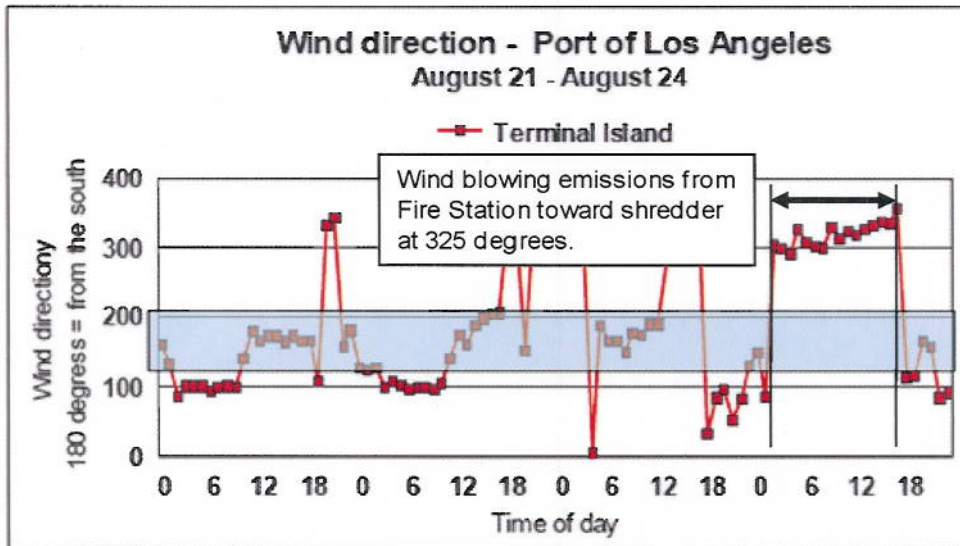


Figure 33 Local wind direction – August 21 to August 24

Figure 8: Wind Direction Blowing from Fire Station Toward Shredder



CONCLUSION

In summary, the DELTA Group report has myriad deficiencies and inaccuracies. The report wrongly implies that there is an imminent respirable health hazard from ambient lead. The report grossly overstates air emissions from SA Recycling and inaccurately attributes all ambient lead particulate to the Terminal Island shredder. In fact, the report actually establishes that the ambient levels of lead are well below EPA's NAAQS for lead and demonstrates that there are other sources of lead coming from other directions. We recommend that the report be further peer reviewed before the department relies on it for any regulatory purpose.

Should you have any questions please contact me at (949) 248-8490 x225.

Sincerely,



Judy B. Yorke, P.E., C.P.P.
President
Yorke Engineering, LLC

cc: Mr. Elio Torrealba, SA Recycling
Mr. Maziar Movassaghi, Acting Director
Ms. Odette Madriago, Chief Deputy Director
Mr. Rick Brausch, Deputy Director